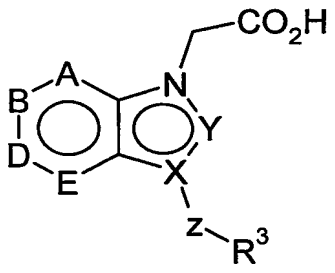
Claims

1. A compound of formula (I) or a pharmaceutically acceptable salt thereof:



(I)

in which

each of A,B,D and E is independently C-R^1 or N;

Y = C-R^2 , N or C=O;

Z is oxygen, sulphur, a C_{1-6}alkylene chain or a bond;

R^1 is independently selected from hydrogen, halogen, CN, nitro, $S(O)_xR^6$, OR^6, $SO_2NR^4R^5$, $CONR^4R^5$, NR^4R^5, $NR^7SO_2R^7$, $NR^7C(O)_xR^7$, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_{1-6}alkyl, aryl or heteroaryl, the latter five groups being optionally substituted by one or more substituents independently selected from 1-3 halogen atoms, -OR^7 and –NR^4R^5, S(O)xR^8 , $C(O)NR^4R^5$, where x is 0,1 or 2;

R^2 is C_{1-6}alkyl which may be optionally substituted by one or more substituents independently selected from halogen atoms, aryl, -OR^9 and –$NR^{10}R^{11}$;

R^3 is an aryl or heteroaryl group each of which is optionally substituted by one or more substituents independently selected from halogen, CN, nitro, $S(O)_xR^6$, OR^7, $SO_2NR^4R^5$, $CONR^4R^5$, NR^4R^5, $NR^7SO_2R^3$, $NR^7C(O)_xR^6$, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_{1-6} alkyl, the

latter three groups being optionally substituted by one or more substituents independently selected from halogen atoms, -OR^6 and –NR^4R^5, where x= 0,1 or 2;

R^4 and R^5 independently represent a hydrogen atom, a C_{1-6}alkyl group, or aryl group the latter two of which may be optionally substituted by one or more substituent groups independently selected from halogen atoms, aryl, -OR^{12} and -$NR^{13}R^{14}$, -$CONR^{13}R^{14}$, -$NR^{13}COR^{14}$,-$SO_2NR^{13}R^{14}$, $NR^{13}SO_2R^{14}$;

or

R^4 and R^5 together with the nitrogen atom to which they are attached can form a 3-8 membered saturated heterocylic ring optionally containing one or more atoms selected from O, S, NR^{15}, and itself optionally substituted by C_{1-3} alkyl, halogen;

R^6 represents a C_{1-6}alkyl which may be optionally substituted by one or more substituents independently selected from halogen atoms, aryl, -OR^9 and –$NR^{10}R^{11}$.

each of R^7, R^8 R^9, R^{10}, R^{11}, R^{12}, R^{13}, R^{14}, independently represents a hydrogen atom, C_1-C_6, alkyl, an aryl or a heteroaryl group which may be optionally substituted by one or more halogen atoms, OH, O-C_1-C_6alkyl; and

R^{15} is hydrogen, C_{1-4} alkyl, -COC_1-C_4 alkyl, -$COQC_1$-C_4alkyl, Q=O or NR^6,

provided that:

the number of nitrogen atoms within the ring ABDE is 1 or 2 when Y is CR^2 and

R^3 cannot be phenyl when Y is C=O and X is nitrogen.

2. A compound according to claim 1 in which A, B, D and E are all C-R^1.

3. A compound according to claim 1 in which one of A, D or E is N and D and the others are C-R^1 where R^1 is hydrogen, phenyl, CF_3, CN, alkyl or halogen.

4. A compound according to any one of claims 1 to 3 in which Y is C=O and X is N.

5. A compound according to claim 4 in which Z is a bond.

6. A compound according to any one of claims 1 to 3 in which Y is nitrogen or C-R^2 where R^2 is methyl.

7. A compound according to claim 6 in which X is carbon,

8. A compound according to claim 6 or 7 in which Z is sulfur, methylene or a bond.

9. A compound according to claim 1 selected from:

5-methyl-3-(4-quinolinyl)-1*H*-indazole-1-acetic acid;

5-cyano-3-(4-quinolinyl)-1*H*-indazole-1-acetic acid;

3-(6-fluoro-4-quinolinyl)-4-(trifluoromethyl)-1*H*-indazole-1-acetic acid;

4-iodo-3-(4-quinolinyl)-1*H*-indazole-1-acetic acid;

3-[(4-chlorophenyl)thio]-5-iodo-1*H*-indazole-1-acetic acid;

3-(7-chloro-4-quinolinyl)-2-methyl-1*H*-pyrrolo[2,3-*b*]pyridine-1-acetic acid, sodium salt;

3-[(4-Chloro-2,4-cyclohexadien-1-yl)thio]-2,5-dimethyl-1*H*-pyrrolo[3,2-*b*]pyridine-1-acetic acid;

2,5-Dimethyl-3-[[4-(methylsulfonyl)-2,4-cyclohexadien-1-yl]methyl]-1*H*-pyrrolo[3,2-*b*]pyridine-1-acetic acid;

2,5-Dimethyl-3-[[4-(methylsulfonyl)phenyl]thio]- 1*H*-pyrrolo[3,2-*b*]pyridine-1-acetic acid;

4-Chloro-3-[(4-chlorophenyl)thio]-2-methyl-1*H*-pyrrolo[3,2-*c*]pyridine-1-acetic acid;

4-Chloro-2-methyl-3-[[4-(methylsulfonyl)phenyl]thio]- 1*H*-pyrrolo[3,2-*c*]pyridine-1-acetic acid;

3-[(4-Chlorophenyl)thio]-2-methyl-4-phenyl-1*H*-pyrrolo[3,2-*c*]pyridine-1-acetic acid;

2-Methyl-3-[[4-(methylsulfonyl)phenyl]thio]-4-phenyl-1*H*-pyrrolo[3,2-*c*] pyridine-1-acetic acid;

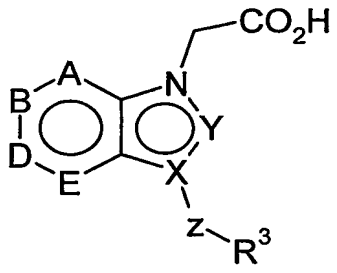
and pharmaceutically acceptable salts thereof.

10. A compound of formula (I) according to any one of claims 1 to 9 for use in therapy.

11. A method of treating a disease mediated by prostaglandin D2, which comprises administering to a patient a therapeutically effective amount of a compound of formula (I), or a pharmaceutically acceptable salt as defined in claims 1 to 9.

12. A method of treating according to claim 11 wherein the disease is asthma or rhinitis.

13. Use of a compound of formula (I) or a pharmaceutically acceptable salt thereof in the manufacture of a medicament for the treatment of a disease mediated by prostaglandin D2:



(I)

in which

each of A,B,D and E is independently C-R^1 or N;

Y = C-R^2 , N or C=O;

Z is oxygen, sulphur, a C_{1-6}alkylene chain or a bond;

R^1 is independently selected from hydrogen, halogen, CN, nitro, $S(O)_xR^6$, OR^6, $SO_2NR^4R^5$, $CONR^4R^5$, NR^4R^5, $NR^7SO_2R^7$, $NR^7C(O)_xR^7$, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_{1-6}alkyl, aryl or heteroaryl, the latter five groups being optionally substituted by one or more substituents independently selected from 1-3 halogen atoms, -OR^7 and –NR^4R^5, S(O)xR^8 , C(O)NR^4R^5, where x is 0,1 or 2;

R^2 is C_{1-6}alkyl which may be optionally substituted by one or more substituents independently selected from halogen atoms, aryl, $-OR^9$ and $-NR^{10}R^{11}$;

R^3 is an aryl or heteroaryl group each of which is optionally substituted by one or more substituents independently selected from halogen, CN, nitro, $S(O)_xR^6$, OR^7, $SO_2NR^4R^5$, $CONR^4R^5$, NR^4R^5, $NR^7SO_2R^3$, $NR^7C(O)_xR^6$, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_{1-6} alkyl, the latter three groups being optionally substituted by one or more substituents independently selected from halogen atoms, $-OR^6$ and $-NR^4R^5$, where x= 0,1 or 2;

R^4 and R^5 independently represent a hydrogen atom, a C_{1-6}alkyl group, or aryl group the latter two of which may be optionally substituted by one or more substituent groups independently selected from halogen atoms, aryl, $-OR^{12}$ and $-NR^{13}R^{14}$, $-CONR^{13}R^{14}$, $-NR^{13}COR^{14}$, $-SO_2NR^{13}R^{14}$, $NR^{13}SO_2R^{14}$;

or

R^4 and R^5 together with the nitrogen atom to which they are attached can form a 3-8 membered saturated heterocylic ring optionally containing one or more atoms selected from O, S, NR^{15}, and itself optionally substituted by C_1-$_3$ alkyl, halogen;

R^6 represents a C_{1-6}alkyl which may be optionally substituted by one or more substituents independently selected from halogen atoms, aryl, $-OR^9$ and $-NR^{10}R^{11}$.

each of R^7, R^8 R^9, R^{10}, R^{11}, R^{12}, R^{13}, R^{14}, independently represents a hydrogen atom, C_1-C_6, alkyl, an aryl or a heteroaryl group which may be optionally substituted by one or more halogen atoms, OH, O-C_1-C_6alkyl; and

R^{15} is hydrogen, C_1-$_4$ alkyl, $-COC_1$-C_4 alkyl, $-COQC_1$-C_4alkyl, Q=O or NR^6,

provided that:

the number of nitrogen atoms within the ring ABDE is 1 or 2 when Y is CR^2 and

R^3 cannot be phenyl when Y is C=O and X is nitrogen.

14. Use according to claim 13 wherein the disease is asthma or rhinitis.

15. Use according to claim 13 or 14 wherein the compound is selected from:

5-methyl-3-(4-quinolinyl)-1*H*-indazole-1-acetic acid;

5-cyano-3-(4-quinolinyl)-1*H*-indazole-1-acetic acid;

3-(6-fluoro-4-quinolinyl)-4-(trifluoromethyl)-1*H*-indazole-1-acetic acid;

4-iodo-3-(4-quinolinyl)-1*H*-indazole-1-acetic acid;

3-[(4-chlorophenyl)thio]-5-iodo-1*H*-indazole-1-acetic acid;

3-(7-chloro-4-quinolinyl)-2-methyl-1*H*-pyrrolo[2,3-*b*]pyridine-1-acetic acid, sodium salt;

3-[(4-Chloro-2,4-cyclohexadien-1-yl)thio]-2,5-dimethyl-1*H*-pyrrolo[3,2-*b*]pyridine-1-acetic acid;

2,5-Dimethyl-3-[[4-(methylsulfonyl)-2,4-cyclohexadien-1-yl]methyl]-1*H*-pyrrolo[3,2-*b*]pyridine-1-acetic acid;

2,5-Dimethyl-3-[[4-(methylsulfonyl)phenyl]thio]- 1*H*-pyrrolo[3,2-*b*]pyridine-1-acetic acid;

4-Chloro-3-[(4-chlorophenyl)thio]-2-methyl-1*H*-pyrrolo[3,2-*c*]pyridine-1-acetic acid;

4-Chloro-2-methyl-3-[[4-(methylsulfonyl)phenyl]thio]- 1*H*-pyrrolo[3,2-*c*]pyridine-1-acetic acid;

3-[(4-Chlorophenyl)thio]-2-methyl-4-phenyl-1*H*-pyrrolo[3,2-*c*]pyridine-1-acetic acid;

2-Methyl-3-[[4-(methylsulfonyl)phenyl]thio]-4-phenyl-1*H*-pyrrolo[3,2-*c*] pyridine-1-acetic acid;

and pharmaceutically acceptable salts thereof.